



Water-Data Report 2008

## 01407760 JUMPING BROOK NEAR NEPTUNE CITY, NJ

SHARK RIVER BASIN

LOCATION.--Lat 40°12'12", long 74°03'57" referenced to North American Datum of 1983, Neptune Township, Monmouth County, NJ, Hydrologic Unit 02030104, on left bank 100 ft downstream from dam on Jumping Brook Reservoir, 500 ft upstream of bridge on Old Corlies Avenue, 0.8 mi upstream from mouth, and 1.4 mi west of Neptune City.

DRAINAGE AREA.--6.46 mi<sup>2</sup>.

### **SURFACE-WATER RECORDS**

PERIOD OF RECORD.--October 1966 to current year. Records for water years 1976-83 are unpublished but are available in the files of New Jersey Water Science Center.

REVISED RECORDS.--WDR NJ-84-1: drainage area.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 13.76 ft above NGVD of 1929.

COOPERATION.--Water-stage recorder inspected by and records of diversion provided by New Jersey-American Water Co.

REMARKS.--Records good, except discharges above 300 ft<sup>3</sup>/s, which are fair. Diversion above station by New Jersey-American Water Company for municipal supply (see 01407759) and by farmers and golf courses for irrigation. Several measurements of water temperature were made during the year.

## 01407760 JUMPING BROOK NEAR NEPTUNE CITY, NJ—Continued

**DISCHARGE, CUBIC FEET PER SECOND**  
**WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008**  
**DAILY MEAN VALUES**

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	1.9	3.5	3.1	11	52	6.5	11	4.4	5.1	3.3	2.7	1.6
2	1.9	3.2	3.6	7.4	44	5.2	8.3	4.2	3.5	2.5	3.0	1.5
3	2.0	3.1	29	5.4	11	4.9	5.5	4.0	3.2	2.4	3.0	1.5
4	2.0	3.0	7.1	4.9	8.0	4.9	23	4.0	21	2.3	2.4	1.3
5	1.9	2.9	4.6	5.4	6.9	13	9.7	3.9	33	4.8	2.3	1.5
6	2.0	8.4	3.8	5.9	6.1	6.6	6.4	3.9	7.3	3.0	2.5	37
7	2.0	4.7	3.3	5.7	9.3	24	5.5	3.7	5.1	2.8	2.3	31
8	2.0	3.3	3.4	5.4	6.2	110	5.3	3.9	4.0	2.5	2.3	4.9
9	2.3	3.3	4.1	5.0	5.4	26	4.9	30	3.2	2.3	2.1	5.9
10	9.0	4.7	7.8	4.8	5.1	12	4.9	16	2.9	2.3	2.6	5.2
11	4.3	3.6	5.3	17	4.3	9.4	4.7	7.0	2.8	1.9	3.7	3.1
12	4.5	3.2	4.4	11	4.7	7.9	11	27	2.5	1.9	2.6	5.0
13	2.7	3.9	21	7.2	70	6.7	6.5	14	2.4	1.9	2.7	7.5
14	2.2	3.3	20	40	28	6.4	4.9	6.6	4.8	2.0	3.2	3.4
15	2.1	3.6	6.6	13	11	8.5	4.6	5.4	24	1.9	9.0	2.4
16	2.1	3.3	68	7.5	7.9	6.5	4.4	33	15	1.9	5.3	2.1
17	2.0	2.9	18	7.5	6.9	5.6	4.3	28	4.6	1.9	2.6	2.0
18	2.1	3.0	8.3	41	11	5.4	4.3	9.7	3.4	1.8	2.1	2.0
19	38	7.3	6.2	12	8.0	12	4.1	7.6	3.1	1.8	2.0	1.9
20	19	6.4	5.3	7.7	6.0	27	4.1	13	2.7	1.8	1.9	1.9
21	5.4	4.1	5.2	5.8	5.3	9.8	4.2	15	2.5	1.7	1.8	1.9
22	3.7	3.4	4.8	5.6	10	6.7	4.1	6.8	3.6	1.7	1.7	1.8
23	3.1	3.0	30	5.8	14	5.7	4.1	5.3	3.0	6.0	1.8	1.8
24	4.9	2.9	29	5.1	8.6	5.3	4.0	4.8	3.2	25	1.8	1.8
25	18	2.9	9.0	4.7	7.5	5.1	3.9	4.5	2.9	5.1	1.7	1.9
26	19	12	6.6	4.7	8.2	5.1	3.9	4.0	2.5	2.9	1.7	182
27	36	11	6.3	4.9	8.8	5.5	4.0	4.8	3.8	135	1.7	17
28	10	4.9	5.2	4.9	5.8	5.4	11	5.6	4.3	38	1.6	8.2
29	5.1	3.8	22	4.9	5.0	4.8	13	3.9	3.0	6.6	1.6	83
30	4.2	3.3	12	5.1	---	4.5	5.8	3.7	8.7	4.0	2.0	11
31	3.9	---	30	4.5	---	4.5	---	6.2	---	3.5	1.7	---
<b>Total</b>	219.3	131.9	393.0	280.8	385.0	370.9	195.4	293.9	191.1	276.5	79.4	433.1
<b>Mean</b>	7.07	4.40	12.7	9.06	13.3	12.0	6.51	9.48	6.37	8.92	2.56	14.4
<b>Max</b>	38	12	68	41	70	110	23	33	33	135	9.0	182
<b>Min</b>	1.9	2.9	3.1	4.5	4.3	4.5	3.9	3.7	2.4	1.7	1.6	1.3

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2008, BY WATER YEAR (WY)**

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Mean</b>	8.11	8.92	10.6	12.4	11.6	14.1	13.9	11.5	7.54	7.22	7.19	7.27
<b>Max</b>	45.7	47.4	30.5	55.5	62.1	47.1	66.5	53.8	23.7	21.5	19.0	24.2
<b>(WY)</b>	(2006)	(1978)	(1970)	(1979)	(1979)	(1984)	(1980)	(1989)	(1972)	(1989)	(1992)	(1971)
<b>Min</b>	1.97	1.89	2.78	1.94	3.40	3.86	3.29	2.08	2.11	1.90	1.52	1.25
<b>(WY)</b>	(1982)	(1982)	(1981)	(1981)	(2002)	(1985)	(1985)	(1977)	(1986)	(2002)	(1982)	(1982)

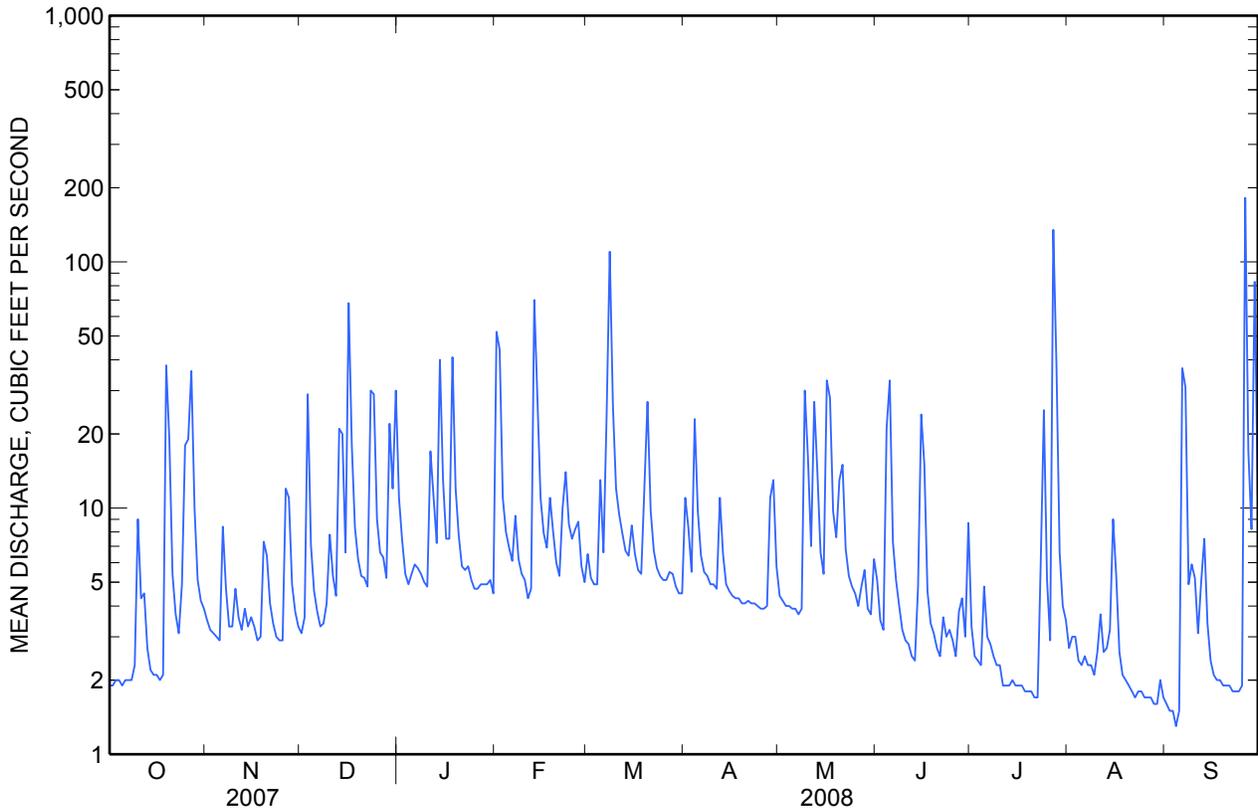
01407760 JUMPING BROOK NEAR NEPTUNE CITY, NJ—Continued

SUMMARY STATISTICS

	Calendar Year 2007		Water Year 2008		Water Years 1967 - 2008	
<b>Annual total</b>	3,865.0		3,250.3			
<b>Annual mean</b>	10.6		8.88		10.0	
<b>Highest annual mean</b>					20.4	1979
<b>Lowest annual mean</b>					4.05	1981
<b>Highest daily mean</b>	340	Apr 16	182	Sep 26	954	Jan 21, 1979
<b>Lowest daily mean</b>	1.8	Sep 29	1.3	Sep 4	0.12	Sep 15, 1981
<b>Annual seven-day minimum</b>	1.9	Sep 24	1.6	Aug 30	0.51	Oct 7, 1966
<b>Maximum peak flow</b>			<sup>a</sup> 474	Sep 26	<sup>b</sup> 1,830	Sep 12, 1971
<b>Maximum peak stage</b>			5.45	Sep 26	8.44	Oct 14, 2005
<b>Instantaneous low flow</b>			1.0	Sep 4	0.00	Jun 7, 1971
<b>10 percent exceeds</b>	21		19		18	
<b>50 percent exceeds</b>	5.5		4.8		5.0	
<b>90 percent exceeds</b>	2.3		1.9		2.0	

<sup>a</sup> From rating curve extended above 400 ft<sup>3</sup>/s.

<sup>b</sup> From rating curve extended above 150 ft<sup>3</sup>/s.



## 01407760 JUMPING BROOK NEAR NEPTUNE CITY, NJ—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 2001 to current year.

REMARKS.--Cooperative Network Site Descriptor: Urban Land Use Indicator, New Jersey Department of Environmental Protection Watershed Management Area 12.

COOPERATION.--Physical measurements and samples for laboratory analyses were provided by personnel of the NJ Department of Environmental Protection. Determinations of dissolved ammonia, dissolved orthophosphate, and suspended residue were performed by the NJ Department of Health and Senior Services, Environmental and Chemical Laboratory.

WATER-QUALITY DATA  
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 1 of 3

[Remark codes: &lt;, less than; E, estimated.]

Date	Time	Instantaneous discharge, ft <sup>3</sup> /s (00061)	Turbidity white light, det ang 90+/-30 corrctd NTRU (63676)	UV absorbance, 254 nm, wat flt units /cm (50624)	UV absorbance, 280 nm, wat flt units /cm (61726)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd μS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO <sub>3</sub> (00900)
Dec 06...	1000	3.7	2.5	.142	.112	770	10.6	79	6.6	251	-1.0	2.9	38
Feb 21...	0900	5.1	3.3	.105	.081	774	10.6	78	6.7	348	3.0	2.6	40
May 21...	0900	15	6.2	.346	.270	748	9.8	90	6.7	180	15.5	11.5	23
Aug 28...	0900	1.7	5.1	.055	.043	764	7.4	76	6.4	225	24.5	17.1	41

WATER-QUALITY DATA  
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 2 of 3

[Remark codes: &lt;, less than; E, estimated.]

Date	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unfltrd fixed end pt, lab, mg/L as CaCO <sub>3</sub> (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L as SiO <sub>2</sub> (00955)	Sulfate, water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue total non-filterable, mg/L (00530)	Ammonia + org-N, water, fltrd, mg/L as N (00623)
Dec 06...	10.6	2.81	2.78	25.8	8	46.6	<.12	9.2	24.5	E128	152	4	.31
Feb 21...	11.5	2.82	2.76	43.7	8	74.4	<.12	7.3	23.8	174	178	2	.40
May 21...	6.51	1.65	2.00	24.8	11	38.3	<.12	4.6	13.5	E99	120	6	.57
Aug 28...	11.3	3.08	3.03	22.0	11	38.1	E.09	10.1	25.6	E121	140	5	.19

## 01407760 JUMPING BROOK NEAR NEPTUNE CITY, NJ—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008**

Part 3 of 3

[Remark codes: &lt;, less than; E, estimated.]

Date	Ammonia water, fltrd, mg/L as N (00608)	Nitrate + nitrite water fltrd, mg/L as N (00631)	Particulate nitro- gen, susp, water, mg/L (49570)	Total nitro- gen, water, fltrd, mg/L (00602)	Total nitro- gen, water, unfltrd, mg/L (00600)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Phos- phorus, water, fltrd, mg/L as P (00666)	Phos- phorus, water, unfltrd, mg/L as P (00665)	Total carbon, suspnd sedimnt total, mg/L (00694)	Inor- ganic carbon, suspnd sedimnt total, mg/L (00688)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	Boron, water, fltrd, µg/L (01020)
<b>Dec</b> <b>06...</b>	.122	.18	E.02	.49	E.51	E.006	E.005	.016	.3	<.04	.3	3.3	24
<b>Feb</b> <b>21...</b>	.195	.44	.04	.84	.88	<.010	E.006	.017	.7	<.04	.7	2.4	21
<b>May</b> <b>21...</b>	.113	.21	.10	.78	.88	E.006	.021	.044	1.3	<.04	1.3	6.4	21
<b>Aug</b> <b>28...</b>	.080	.17	.04	.36	.40	E.005	<.008	.018	.5	<.04	.5	1.7	24